

**ABSTRACT**

A system and method for applying one or more chemicals to a tissue sample is provided. The system preferably includes a cassette for housing a slide device, a film, and an injection system. The slide device preferably includes a specimen slide for containing the tissue sample and a cover plate connected to the specimen slide. The film is preferably moveable through the cassette along guide rollers and preferably contains a plurality of containers containing one or more chemicals. The injection system may include a piston for displacing the chemicals from the containers through an injection port to the tissue sample. The cassette may be placed on a cassette driver that contains a motor-driven shaft for driving the piston and moving the film.

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